

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: NEO-RAY

Report Number: P332067

Luminaire Tested: **S123DIP-S1165D805U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332067
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D805U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7609.7 lumens
Efficiency: N/A
Efficacy: 125.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

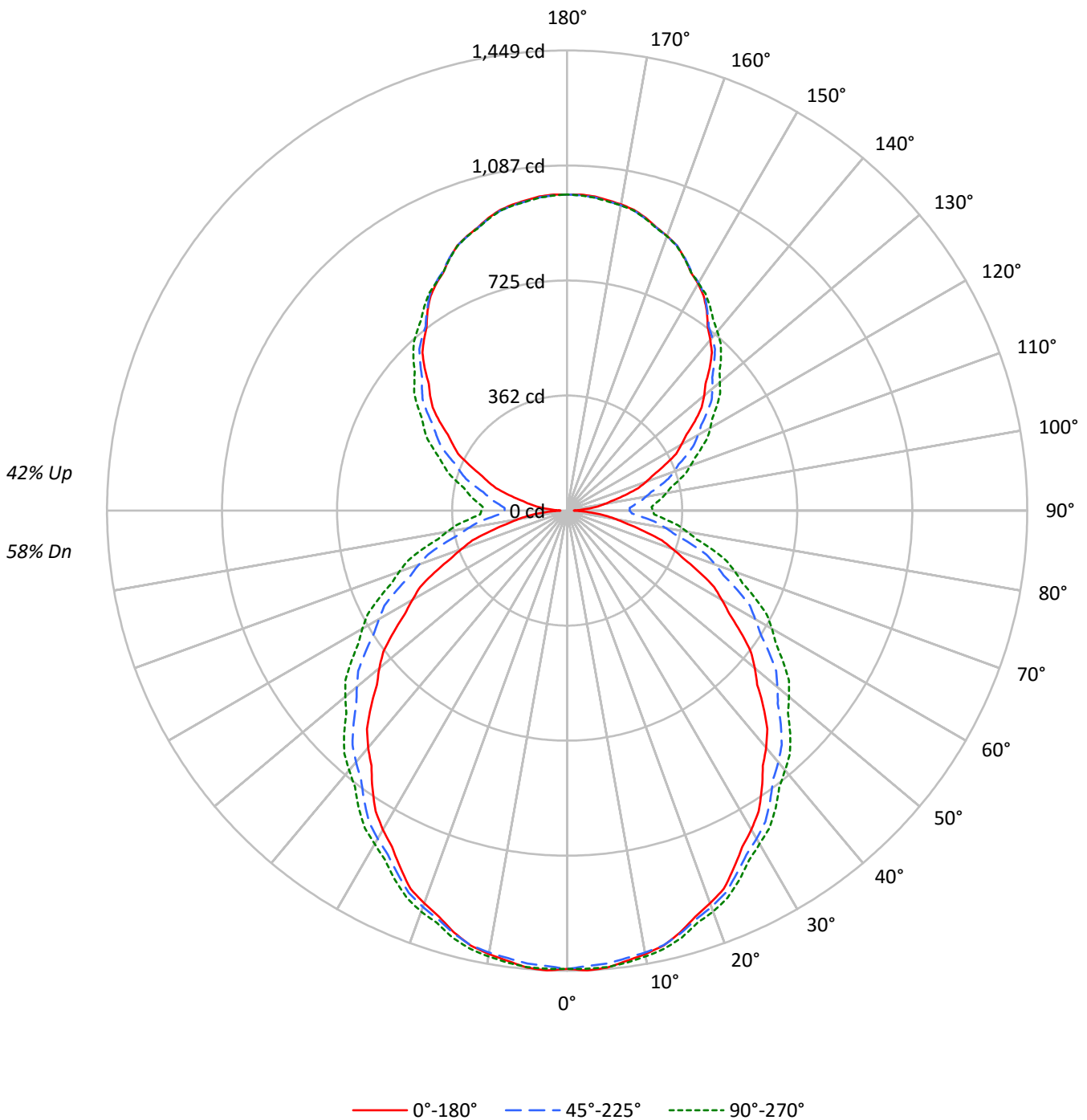
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0													
RCR																																					
0	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64	58																			
1	98	94	89	85	91	87	83	80	75	72	70	65	62	60	54	53	51	47																			
2	89	81	74	69	83	76	70	65	65	61	57	56	52	49	47	45	42	38																			
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	41	38	36	32																			
4	74	62	54	48	69	58	51	45	51	45	40	44	39	35	37	33	30	27																			
5	68	56	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26	23																			
6	62	50	41	35	58	47	39	33	41	34	30	35	30	26	30	26	23	20																			
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	27	23	20	18																			
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16																			
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14																			
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	21	18	15	13																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15532	15532	15532
5°	15581	15141	15150
10°	15441	14792	14718
15°	15242	14397	14247
20°	14958	13944	13729
25°	14607	13423	13185
30°	14248	12956	12632
35°	13844	12460	12191
40°	13459	12010	11719
45°	13033	11577	11342
50°	12611	11149	10926
55°	12146	10713	10553
60°	11692	10267	10169
65°	11230	9793	9712
70°	10529	9260	9244
75°	9643	8650	8768
80°	8626	8052	8224
85°	7681	7639	7911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.8	1.8
10°-20°	390.0	5.1
20°-30°	583.2	7.7
30°-40°	696.5	9.2
40°-50°	728.7	9.6
50°-60°	683.9	9.0
60°-70°	571.2	7.5
70°-80°	408.7	5.4
80°-90°	246.6	3.2
90°-100°	217.8	2.9
100°-110°	306.4	4.0
110°-120°	405.1	5.3
120°-130°	477.0	6.3
130°-140°	507.2	6.7
140°-150°	483.8	6.4
150°-160°	403.9	5.3
160°-170°	268.8	3.5
170°-180°	94.1	1.2
0°-30°	1110.0	14.6
0°-40°	1806.5	23.7
0°-60°	3219.1	42.3
0°-90°	4445.5	58.4
90°-120°	929.3	12.2
90°-150°	2397.4	31.5
90°-180°	3164.0	41.6
0°-180°	7609.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1443	1443	1443	1443	1443	
5°	1445	1441	1432	1444	1443	137
15°	1375	1380	1379	1393	1393	387
25°	1242	1257	1262	1282	1283	572
35°	1069	1094	1114	1137	1144	668
45°	874	912	951	980	993	674
55°	666	719	775	816	830	597
65°	461	522	591	636	654	455
75°	250	324	402	452	473	267
85°	77	156	239	290	308	81
90°	21	106	196	251	270	17
95°	63	131	214	263	281	65
105°	188	230	302	345	362	201
115°	340	363	416	453	467	337
125°	491	496	537	566	575	438
135°	634	638	654	678	685	488
145°	767	767	769	781	784	479
155°	876	876	877	880	875	403
165°	955	952	952	956	952	269
175°	993	990	990	994	989	94
180°	995	995	995	995	995	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1449.3	1448.5	1447.6	1446.8	1445.9	1444.4	1442.2	1439.9	1437.7	1435.5	1437.7
5°	1444.6	1443.9	1443.2	1442.5	1441.8	1440.4	1438.3	1436.2	1434.1	1432.0	1434.8
7.5°	1430.4	1430.6	1430.7	1430.9	1431.0	1430.1	1428.0	1426.0	1424.0	1421.9	1425.4
10°	1417.9	1418.6	1419.3	1420.0	1420.7	1420.1	1418.4	1416.6	1414.9	1413.1	1416.6
12.5°	1402.8	1403.7	1404.7	1405.7	1406.7	1406.6	1405.4	1404.2	1403.0	1401.8	1405.0
15°	1375.4	1376.5	1377.5	1378.6	1379.6	1380.0	1379.6	1379.3	1378.9	1378.6	1382.1
17.5°	1340.8	1342.9	1345.0	1347.1	1349.2	1350.2	1350.1	1349.9	1349.8	1349.6	1352.8
20°	1315.7	1317.8	1319.9	1322.0	1324.1	1325.5	1326.2	1326.9	1327.6	1328.3	1331.4
22.5°	1289.3	1291.4	1293.5	1295.6	1297.7	1299.2	1300.2	1301.2	1302.1	1303.1	1307.1
25°	1241.8	1245.3	1248.8	1252.3	1255.8	1258.0	1259.1	1260.1	1261.2	1262.2	1266.8
27.5°	1194.0	1198.0	1202.0	1206.0	1209.9	1213.1	1215.3	1217.5	1219.8	1222.0	1225.9
30°	1160.1	1164.6	1169.1	1173.7	1178.2	1181.9	1184.7	1187.5	1190.3	1193.1	1197.3
32.5°	1122.3	1127.4	1132.5	1137.6	1142.7	1147.1	1150.7	1154.4	1158.0	1161.6	1166.1
35°	1068.9	1074.5	1080.1	1085.7	1091.3	1096.3	1100.9	1105.4	1109.9	1114.5	1119.7
37.5°	1012.3	1018.6	1024.9	1031.2	1037.5	1043.4	1049.0	1054.6	1060.2	1065.8	1071.7
40°	974.6	980.9	987.2	993.4	999.7	1006.4	1013.4	1020.3	1027.3	1034.3	1040.3
42.5°	933.1	940.8	948.5	956.1	963.8	971.3	978.6	985.8	993.1	1000.4	1006.9
45°	874.0	882.4	890.7	899.1	907.5	916.1	924.8	933.5	942.3	951.0	957.6
47.5°	812.0	821.5	831.0	840.6	850.1	859.8	869.8	879.8	889.8	899.8	907.2
50°	771.8	781.6	791.4	801.1	810.9	821.2	832.1	842.9	853.7	864.5	872.6
52.5°	729.1	739.4	749.7	760.1	770.4	781.6	793.5	805.4	817.4	829.3	837.7
55°	666.5	678.0	689.5	701.1	712.6	724.6	737.2	749.8	762.4	775.0	784.4
57.5°	605.5	617.5	629.5	641.5	653.6	666.5	680.2	694.0	707.7	721.5	731.0
60°	562.7	575.3	587.9	600.5	613.0	626.5	640.8	655.1	669.5	683.8	693.6
62.5°	522.5	535.4	548.2	561.1	573.9	587.9	603.1	618.2	633.4	648.6	658.3
65°	460.6	474.2	487.8	501.4	515.1	529.6	544.9	560.3	575.7	591.0	601.5
67.5°	397.7	412.2	426.6	441.1	455.5	470.6	486.2	501.9	517.5	533.2	544.6
70°	353.7	368.7	383.7	398.7	413.8	429.7	446.4	463.2	480.0	496.7	507.9
72.5°	313.4	328.5	343.5	358.5	373.5	389.7	407.0	424.3	441.7	459.0	470.5
75°	249.9	266.4	282.8	299.2	315.6	332.5	350.0	367.5	384.9	402.4	413.9
77.5°	194.6	211.2	227.7	244.3	260.8	277.9	295.5	313.1	330.7	348.3	360.5
80°	155.6	172.7	189.9	207.0	224.1	241.7	259.9	278.1	296.2	314.4	326.3
82.5°	121.7	139.1	156.5	173.9	191.2	209.2	227.6	246.1	264.5	282.9	294.8
85°	77.0	94.5	112.0	129.4	146.9	164.9	183.4	201.9	220.4	238.9	250.8
87.5°	42.0	59.7	77.5	95.2	112.9	130.9	149.2	167.5	185.7	204.0	216.0
90°	21.2	40.1	58.9	77.8	96.6	116.1	136.2	156.2	176.3	196.4	209.0
92.5°	38.1	54.7	71.3	88.0	104.6	122.3	141.1	159.9	178.8	197.6	209.7
95°	63.4	78.3	93.1	107.9	122.8	139.5	158.0	176.5	195.0	213.5	225.0
97.5°	97.3	110.5	123.7	136.9	150.1	165.4	182.8	200.1	217.5	234.8	246.0
100°	120.5	132.7	144.9	157.1	169.4	183.9	200.9	217.8	234.7	251.7	262.3
102.5°	147.4	158.1	168.7	179.4	190.1	203.9	220.9	237.8	254.7	271.7	282.0
105°	188.5	197.2	206.0	214.7	223.4	236.1	252.7	269.2	285.8	302.4	312.2
107.5°	234.8	242.1	249.4	256.8	264.1	275.2	290.1	305.0	319.8	334.7	344.6
110°	263.5	270.2	276.8	283.4	290.1	300.5	314.9	329.2	343.5	357.8	367.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	294.8	300.2	305.6	310.9	316.3	325.7	339.2	352.7	366.2	379.7	389.3
115°	340.1	344.9	349.6	354.3	359.0	367.5	379.7	391.9	404.1	416.4	424.9
117.5°	387.1	390.0	392.9	395.8	398.8	405.9	417.3	428.6	440.0	451.3	459.6
120°	415.2	418.0	420.8	423.6	426.3	433.1	443.7	454.4	465.0	475.7	483.6
122.5°	445.8	447.5	449.2	450.9	452.5	458.6	469.1	479.7	490.2	500.7	508.0
125°	491.0	491.5	492.1	492.6	493.1	498.3	508.0	517.8	527.6	537.4	544.0
127.5°	534.2	534.9	535.7	536.5	537.2	541.6	549.6	557.6	565.6	573.6	579.6
130°	563.0	564.0	565.0	566.1	567.1	570.9	577.3	583.8	590.3	596.7	602.7
132.5°	590.5	591.8	593.1	594.4	595.7	599.0	604.2	609.4	614.6	619.8	625.4
135°	634.1	634.8	635.5	636.2	636.9	639.0	642.7	646.4	650.1	653.7	659.3
137.5°	674.4	675.0	675.6	676.2	676.8	678.4	681.0	683.6	686.2	688.9	693.7
140°	701.3	702.2	703.1	703.9	704.8	705.8	707.1	708.3	709.5	710.7	715.8
142.5°	727.0	727.6	728.1	728.7	729.3	729.9	730.4	730.9	731.4	732.0	736.5
145°	767.0	767.0	767.0	767.0	767.0	767.2	767.8	768.3	768.8	769.3	772.0
147.5°	800.5	801.1	801.7	802.3	803.0	803.5	804.0	804.5	805.0	805.5	806.3
150°	824.8	825.2	825.5	825.9	826.2	826.6	826.9	827.3	827.6	828.0	828.0
152.5°	844.9	845.3	845.8	846.3	846.8	847.2	847.4	847.6	847.8	848.0	848.3
155°	876.4	876.4	876.4	876.4	876.4	876.5	876.7	876.9	877.1	877.2	877.9
157.5°	903.3	903.1	902.9	902.7	902.5	902.5	902.6	902.8	902.9	903.0	903.8
160°	920.2	919.9	919.5	919.2	918.8	918.7	918.7	918.7	918.7	918.7	919.5
162.5°	935.2	934.8	934.3	933.8	933.3	933.1	933.3	933.4	933.5	933.7	934.5
165°	954.6	954.1	953.6	953.1	952.5	952.3	952.3	952.3	952.3	952.3	953.3
167.5°	970.1	969.4	968.7	968.0	967.3	967.1	967.2	967.3	967.5	967.6	968.7
170°	978.9	978.2	977.5	976.8	976.1	975.7	975.7	975.7	975.7	975.7	977.0
172.5°	985.7	985.1	984.4	983.7	983.0	982.6	982.6	982.6	982.6	982.6	983.7
175°	992.9	992.2	991.6	990.9	990.2	989.8	989.8	989.8	989.8	989.8	990.9
177.5°	995.9	995.4	994.8	994.2	993.7	993.4	993.4	993.4	993.4	993.4	994.2
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1439.9	1442.2	1444.4	1445.4	1445.1	1444.8	1444.5	1444.3
5°	1437.6	1440.4	1443.2	1444.4	1444.1	1443.7	1443.4	1443.0
7.5°	1428.9	1432.4	1435.9	1437.5	1437.0	1436.6	1436.2	1435.8
10°	1420.1	1423.6	1427.1	1428.5	1427.8	1427.1	1426.4	1425.7
12.5°	1408.3	1411.5	1414.7	1415.9	1415.2	1414.5	1413.8	1413.1
15°	1385.5	1389.0	1392.5	1394.1	1393.8	1393.4	1393.1	1392.7
17.5°	1355.9	1359.1	1362.2	1363.5	1363.1	1362.6	1362.1	1361.6
20°	1334.5	1337.7	1340.8	1342.6	1342.9	1343.3	1343.6	1344.0
22.5°	1311.1	1315.1	1319.0	1320.9	1320.7	1320.5	1320.3	1320.1
25°	1271.3	1275.9	1280.4	1282.7	1282.7	1282.7	1282.7	1282.7
27.5°	1229.8	1233.7	1237.6	1239.7	1240.0	1240.3	1240.6	1240.9
30°	1201.5	1205.7	1209.8	1211.9	1211.9	1211.9	1211.9	1211.9
32.5°	1170.6	1175.1	1179.5	1182.2	1183.0	1183.9	1184.7	1185.5
35°	1125.0	1130.2	1135.4	1138.8	1140.2	1141.6	1143.0	1144.3
37.5°	1077.6	1083.6	1089.5	1093.0	1094.2	1095.3	1096.4	1097.5
40°	1046.2	1052.1	1058.1	1061.7	1063.1	1064.5	1065.9	1067.3
42.5°	1013.4	1019.9	1026.4	1030.6	1032.5	1034.5	1036.4	1038.4
45°	964.3	970.9	977.6	982.3	985.1	987.9	990.7	993.4
47.5°	914.7	922.2	929.7	934.5	936.6	938.8	941.0	943.1
50°	880.6	888.7	896.7	901.9	904.4	906.8	909.3	911.7
52.5°	846.0	854.3	862.6	868.3	871.3	874.3	877.3	880.3
55°	793.8	803.2	812.7	818.8	821.6	824.4	827.2	830.0
57.5°	740.5	750.0	759.5	765.9	769.2	772.5	775.8	779.0
60°	703.3	713.1	722.9	729.7	733.6	737.4	741.2	745.1
62.5°	668.1	677.9	687.7	694.4	697.9	701.5	705.1	708.6
65°	612.0	622.5	633.0	639.9	643.4	646.9	650.4	653.9
67.5°	556.1	567.6	579.0	586.2	589.2	592.1	595.0	598.0
70°	519.1	530.3	541.4	548.8	552.3	555.8	559.2	562.7
72.5°	481.9	493.4	504.8	512.3	515.8	519.3	522.8	526.3
75°	425.5	437.0	448.5	456.4	460.6	464.8	469.0	473.1
77.5°	372.6	384.8	397.0	404.6	407.9	411.1	414.3	417.5
80°	338.1	350.0	361.9	369.6	373.1	376.6	380.1	383.5
82.5°	306.7	318.6	330.4	338.1	341.6	345.1	348.6	352.1
85°	262.7	274.6	286.4	294.1	297.6	301.1	304.6	308.1
87.5°	228.0	240.1	252.1	259.9	263.4	267.0	270.6	274.1
90°	221.5	234.1	246.7	254.9	258.7	262.6	266.4	270.2
92.5°	221.9	234.0	246.2	253.8	256.8	259.8	262.8	265.8
95°	236.5	248.0	259.6	267.1	270.6	274.1	277.6	281.1
97.5°	257.3	268.5	279.7	287.0	290.4	293.8	297.3	300.7
100°	273.0	283.6	294.3	301.5	305.4	309.2	313.1	316.9
102.5°	292.4	302.8	313.1	320.0	323.5	326.9	330.3	333.7
105°	322.0	331.8	341.5	348.2	351.7	355.1	358.6	362.1
107.5°	354.6	364.5	374.4	380.8	383.6	386.5	389.4	392.2
110°	377.4	387.2	396.9	403.0	405.5	407.9	410.4	412.8



TEST NUMBER: P332067

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	399.0	408.6	418.2	424.5	427.6	430.6	433.6	436.6
115°	433.5	442.0	450.6	456.2	458.8	461.4	464.1	466.7
117.5°	467.9	476.2	484.5	489.7	492.0	494.2	496.4	498.7
120°	491.4	499.3	507.1	512.1	514.2	516.3	518.4	520.5
122.5°	515.3	522.6	529.9	534.5	536.5	538.5	540.4	542.4
125°	550.7	557.3	564.0	568.1	569.9	571.6	573.4	575.1
127.5°	585.5	591.4	597.4	601.2	602.7	604.3	605.9	607.5
130°	608.6	614.6	620.5	623.9	624.8	625.7	626.5	627.4
132.5°	630.9	636.4	641.9	645.4	646.8	648.3	649.7	651.2
135°	664.9	670.5	676.1	679.6	681.0	682.4	683.8	685.2
137.5°	698.4	703.2	708.0	711.0	712.0	713.1	714.2	715.3
140°	720.9	725.9	731.0	733.8	734.3	734.9	735.4	735.9
142.5°	741.0	745.5	750.0	752.7	753.5	754.3	755.1	755.9
145°	774.6	777.2	779.8	781.5	782.2	782.9	783.6	784.3
147.5°	807.1	808.0	808.8	809.3	809.5	809.8	810.0	810.2
150°	828.0	828.0	828.0	827.8	827.5	827.1	826.8	826.4
152.5°	848.5	848.8	849.1	848.9	848.1	847.3	846.6	845.8
155°	878.6	879.3	880.0	879.7	878.5	877.3	876.1	874.9
157.5°	904.5	905.2	905.9	905.8	904.9	903.9	902.9	901.9
160°	920.4	921.3	922.1	922.2	921.5	920.8	920.1	919.4
162.5°	935.4	936.3	937.2	937.0	935.9	934.8	933.7	932.6
165°	954.4	955.4	956.5	956.4	955.2	953.9	952.7	951.5
167.5°	969.8	970.8	971.9	971.9	970.8	969.8	968.7	967.6
170°	978.2	979.4	980.6	980.6	979.4	978.2	977.0	975.7
172.5°	984.8	985.9	986.9	986.9	985.6	984.4	983.2	982.0
175°	991.9	992.9	994.0	993.9	992.7	991.5	990.2	989.0
177.5°	995.1	995.9	996.7	996.7	995.7	994.7	993.8	992.8
180°	995.3	995.3	995.3	995.3	995.3	995.3	995.3	995.3

(END OF REPORT)